

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016488**Date Inspected:** 29-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Incident Report generated at Segment 9BW and Segment 9DW

This Quality Assurance (QA) Inspector wrote an Incident Report for welded cope hole at Longitudinal Diaphragm flange to Floor Beam flange termination area as per approved shop drawing FB27A it shall have a radius of R30mm at PP 82 for Segment 9DW at work point W4. Please reference the Incident Report 04-0120F4\_TL-15\_B278\_08-29-2010\_LD\_FB Flange Welded Cope Hole\_9DW at PP 82\_at W4 dated August 29, 2010.

Please reference the pictures attached for more comprehensive details.

Segment 10AE to Segment 10BE

This QA Inspector performed Dimension Control Inspection for measuring Offset along with ABF QA Inspector on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 10AE

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to Segment 10BE between Panel Point (PP) 88 to PP 89 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10AW to Segment 10BW

This QA Inspector performed Dimension Control Inspection for measuring Offset along with ABF QA Inspector on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 10AW to Segment 10BW between Panel Point (PP) 88 to PP 89 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9AW to Segment 9BW (Skin Flatness)

This QA Inspector performed Joint Inspection along with the ABF QA Inspector to check the Skin Flatness between Segment 9AW to Segment 9BW between Panel Points (PP) 73 and PP 74 at the following locations after Heat Straightening:

The skin flatness was measured on South side (Bike Path side at B3 and B4 location) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. Straight Edges of 600mm and 630 mm of length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10AE to Segment 10BE

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10B-003. The welder identification was 046960 and 040320 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Bottom Panel, transverse splice weld.

Segment 10AE to Segment 10BE

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a

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Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10B-004. The welder identification was 040504 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel Bike Path side, transverse splice weld.

Segment 10AE to Segment 10BE

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10B-005. The welder identification was 044515 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-B-U2-FCM-1. The piece mark was identified as the Side Panel Corner Assembly Bike Path side, transverse splice weld.

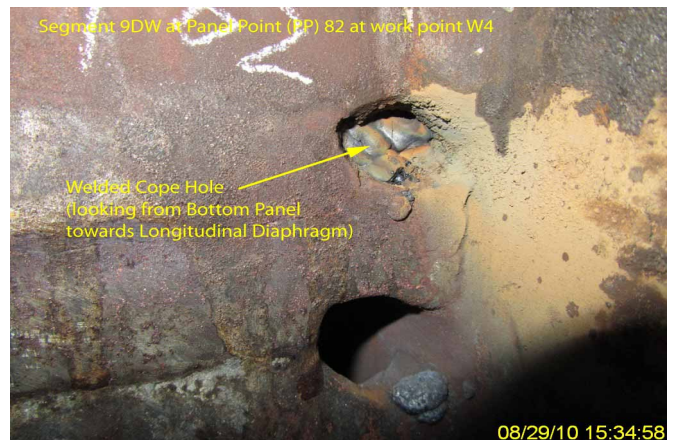
Segment 10AE to Segment 10BE

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10-001. The welder identification was 047353 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233T. The piece mark was identified as the Edge Panel Cross Beam side, transverse splice weld.

Segment 10AE to Segment 10BE

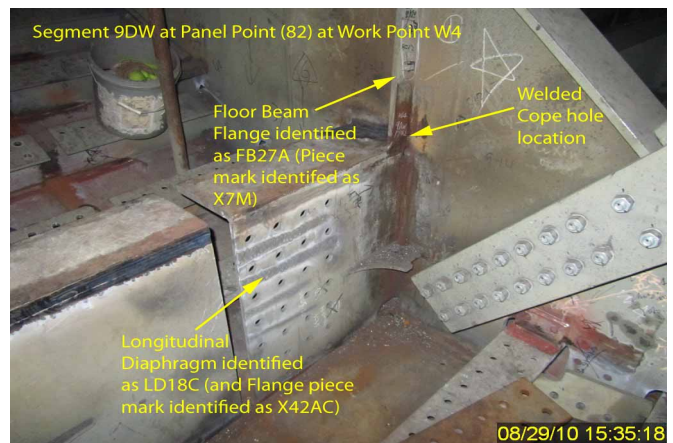
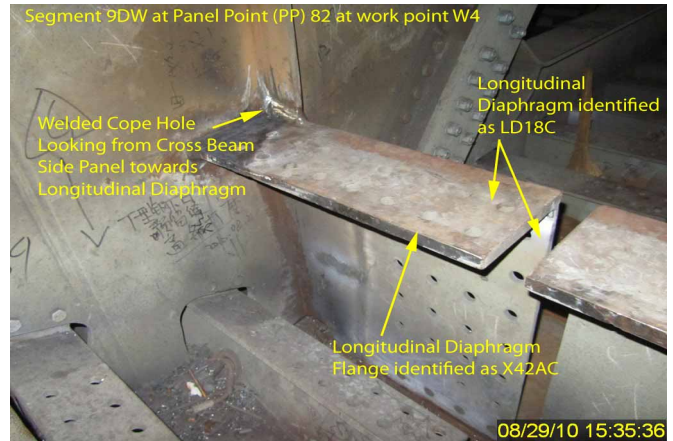
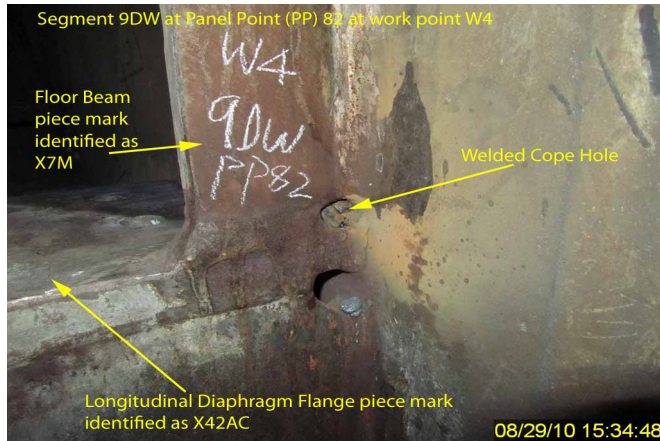
This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10-005. The welder identification was 047353 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233T. The piece mark was identified as the Edge Panel Bike Path side, transverse splice weld.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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## Summary of Conversations:

No relevant conversations were reported on this date.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Math,Manjunath

Quality Assurance Inspector

**Reviewed By:** Peterson,Art

QA Reviewer